

March 2009
FACT SHEET
Authorization to Discharge under the
National Pollutant Discharge Elimination System
for the
Bureau of Indian Affairs -- Torreon Navajo Day School Wastewater Treatment Lagoon

NPDES Permit No. NN0030341

Applicant Address: U.S. Department of the Interior
Bureau of Indian Affairs
Navajo Regional Office
Division of Environmental, Cultural & Safety Management
P.O. Box 1060
Gallup, NM 87305

Applicant Contact: Jean Romancito
Environmental Protection Specialist
(505) 863-8330

Facility Address: Torreon Navajo Day School
Near marker 11, Highway 197
Torreon, NM 87061

Facility
Mailing Address: HCR-79, Box 9
Cuba, NM 87013

Facility Contact: Kenneth Toledo
(505) 731-2272

I. Summary

The U.S. Bureau of Indian Affairs - Navajo Regional Office ("BIA") of the Department of the Interior owns and operates a wastewater treatment system located in the community of Torreon, New Mexico, near the former Torreon Day School in McKinley County, New Mexico. Pursuant to the EPA regulations set forth in Title 40, Code of Federal Regulations (CFR) Part 122.21, the BIA applied to the U.S. Environmental Protection Agency (US EPA) for issuance of a National Pollutant Discharge Elimination System (NPDES) Permit to discharge from its treatment lagoon facility on behalf of Torreon Navajo Day School on October 5, 2007. The facility had an NPDES permit (No. NM0020974) in 1986 which expired March 7, 1991. The permit was terminated and the file closed in 1991 when BIA did not reapply for a permit. The proposed permit is for a new discharge and is assigned a new permit number.

Pursuant to Section 402 of the Clean Water Act (CWA), the USEPA is proposing issuance of the NPDES permit to BIA Torreon Navajo Day School (permittee) for the discharge of treated domestic wastewater to Torreon Wash, flows about 17 miles to Chico Arroyo, which

continues southeast another 6 miles to Rio Puerco, a water of the United States.

II. Description of Facility

The BIA Torreon Day School wastewater treatment lagoon system is located in Torreon, New Mexico, McKinley County; which is in the eastern portion of the Navajo Nation. The facility serves a population of approximately 300, receives only domestic wastewater and averages a design flow of 0.01 million gallons per day (MGD). Although BIA is a federal facility and not a publicly-owned treatment works (POTW), EPA will be proposing federal discharge limits as those that are applicable to POTWs.

The treatment facility consists of two cells, herein denoted as Cells Nos. 1 and 2. The wastewater from the school flows by gravity to a collector, which directs the flow under New Mexico Highway 197 into Cell No. 1 where preliminary settling occurs. Underground transfer piping allows wastewater to flow in succession from Cell No.1 to Cell No. 2. Micro-organisms begin digestion of the solids (anaerobic decomposition) while the liquid portion of the waste stream evaporates to the atmosphere. There is no pretreatment or aeration of the wastewater. Discharge from Cell No. 2 through a 4-inch diameter pipe leads to Outfall No. 001 to receiving waters named Torreon Wash, flows about 17 miles to Chico Arroyo, which continues southeast another 6 miles to Rio Puerco, a water of the United States. Discharge from Cell 2 is controlled by a shutoff valve on the discharge pipe resulting in an intermittent flow. Any sampling and monitoring under the proposed permit shall be performed at Outfall No. 001.

III. Basis of Proposed Permit Requirements

Section 301 of the CWA established a required performance level, referred to as "secondary treatment," that all POTWs were required to meet by July 1, 1977. Federal secondary treatment effluent standards for POTWs are contained in Section 301(b)(1)(B) of the CWA. Implementing regulations for Section 301(b)(1)(B) are found at 40 CFR Part 133. The CWA requires POTWs to meet performance-based requirements based on available wastewater treatment technology. These technology-based effluent limits apply to all municipal wastewater treatment plants, and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD₅ and TSS. The requirements contained in the draft permit are necessary to prevent violations of applicable treatment standards.

In accordance with 40 CFR 122.44(d), the need for discharge limitations for all pollutants that may impact applicable water quality criteria and water quality standards must be evaluated. As part of this evaluation, discharge limitations are based on application of the water quality standards. EPA approved the 1999 Navajo Nation Surface Water Quality Standards ("NNSWQS"), on March 23, 2006. The NNSWQS were revised and promulgated by NNEPA on July 30, 2004 for waters of the Navajo Nation. The approved 1999 Navajo Nation water quality standards and 2004 revisions will be used on a best professional judgment (ABPJ@) basis for purposes of developing water quality based effluent limitations. The requirements contained in the proposed permit are necessary to prevent violations of applicable water quality standards.

IV. Designated Uses of the Receiving Water

The designated uses of the receiving water (Torreon Wash, a tributary to Chico Arroyo, tributary to Rio Puerco), as defined by the 2004 NNSWQS are secondary human contact, aquatic habitat, and livestock and wildlife watering (Table 204.1, page 20.)

V. Determination of Effluent Limitations, Monitoring, and Reporting Requirements

A. Flow Rates

Under the proposed permit, there is no flow limit, but the flow must be monitored and reported. EPA does not have current information on historical flows from this facility. Therefore, the monitoring frequency is set at once per discharge.

B. Five-Day Biochemical Oxygen Demand (BOD₅)

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and a monthly average of 30 mg/l BOD₅, and shall achieve no less than a monthly average rate of 85% removal. These limits are required under 40 CFR Section 133.102(a).

Under 40 CFR Section 122.45(f), mass limits are required for BOD₅. Based upon the 0.01 MGD flow, the mass limits for BOD₅ are based on the following calculations:

Monthly average

$$\frac{0.01 \text{ MG}}{\text{day}} \times \frac{30 \text{ mg}}{1} \times \frac{8.345 \text{ lb/MG}}{\text{mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 1.13 \text{ kg per day}$$

Weekly average

$$\frac{0.01 \text{ MG}}{\text{day}} \times \frac{45 \text{ mg}}{1} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 1.69 \text{ kg per day}$$

The daily maximum will also be monitored and reported. The monitoring frequency is once per discharge. Should the event of a continuous discharge occur over several days or more than one discrete or separate discharge in a month, the monitoring frequency should be no more than once per month. If no discharge occurs, no monitoring is required.

C. Total Suspended Solids (TSS)

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and a monthly average of 30 mg/l TSS, and shall achieve no less than a monthly average rate of 85% removal. These limits are consistent with 40 CFR 133.102(b). Mass limit requirements in accordance with 40 CFR 122.45(f) have also been set in the

proposed permit. Mass loadings shall not exceed a 7-day average of 1.69 kg per day and a 30-day average of 1.13 kg per day. The monitoring frequency is once per discharge, with an added clarification of no more than once per month as discussed in the monitoring frequency for BOD₅ above.

D. Determination of Effluent Limitation for *E. coli*

In the proposed permit, the monthly geometric mean of *E. coli* bacteria shall not exceed 126/100 ml as a monthly average and 235/100 ml as a single sample maximum. These limits are based on the NNSWQS for secondary human contact (p.26). The monitoring frequency is once per discharge, with the added clarification of no more than once per month as discussed in the monitoring frequency for BOD₅ above.

E. Total Residual Chlorine (TRC)

The permit requires chlorination of the effluent before discharge. The discharge shall not exceed a monthly average of 5 µg/l and 11.0 µg/l as a single sample maximum, based on the NNSWQS for the tributaries to Rio Puerco. The monitoring frequency is once per discharge, with the added clarification of no more than once per month as discussed in the monitoring frequency for BOD₅ above.

F. Total Dissolved Solids (TDS)

Since this is considered a new permitted discharge, the regulations at 40 CFR 122.44(i) allow requirements for monitoring as deemed necessary. The monitoring frequency is once per quarter.

G. Total Ammonia Nitrogen (NH₃-N)

The proposed permit requires a monitoring and reporting requirement for total ammonia nitrogen, which includes the ammonium ion (NH₄⁺) and free ammonia (NH₃). The monitoring frequency is once per quarter. If analytical results for the first four quarters reveal ammonia levels are below EPA's National Water Quality Criteria for ammonia, the monitoring frequency will decrease to once per year, consistent with the previous permit. The regulations at 40 CFR Part 122.44(i) allow requirements for monitoring as determined to be necessary. The criteria for ammonia are pH and temperature dependent and therefore, measurements for ammonia shall taken concurrently with temperature and pH measurements.

H. pH

The proposed permit requires that effluent pH not fall below 6.5 or above 9.0 standard pH units, consistent with the NNSWQS for the tributaries to Rio Puerco. The monitoring frequency is once per discharge, with the added clarification of no more than once per month as discussed in the monitoring frequency for BOD₅ above.

I. Temperature

The proposed permit establishes a monitoring requirement for temperature. The monitoring frequency is once per quarter.

VI. Reporting

The proposed permit requires discharge data obtained during the previous three months to be summarized on monthly DMR forms and reported quarterly. If there is no discharge for the month, report AC@ in the No Discharge box on the DMR form for that month. These reports are due January 28, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the US EPA and the Navajo Nation EPA.

VII. General Standards

The proposed permit sets general standards that are narrative water quality standards contained in the Navajo Nation Water Quality Standards, Section 203. These general standards are set forth in Section B. General Discharge Specifications of the permit.

VIII. Permit Reopener

At this time, we have no reason to establish any other water quality-based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursion above a water quality criteria, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. The proposed permit may be modified, in accordance with the requirements set forth at 40 CFR 122.44 and 124.14, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new Tribal water quality standards.

IX. Biosolids Requirements

The permittee shall submit a report 60 days prior to disposal of biosolids. The report shall discuss the quantity of biosolids produced, the treatment applied to biosolids including process parameters, disposal methods, and, if land applied, analyses for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Zinc, and Selenium, and organic-N, ammonium-N, and nitrate-N, all expressed in mg/kg biosolids on a 100% dry weight basis. The permittee shall comply with all standards for biosolids use and disposal at Section 405(d) of the CWA, and 40 CFR Parts 257, 258 and 503.

X. Threatened and Endangered Species and Critical Habitat

A. Background:

Section 7 of the Endangered Species Act (ESA) of 1973 requires Federal agencies

such as EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS), that any actions authorized, funded or carried out by the Agency are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

Since the issuance of NPDES permits by EPA is a Federal action, consideration of a permitted discharge and its effect on any listed species is appropriate. The proposed NPDES permit authorizes the discharge of treated domestic wastewater into the Torreon Wash, a tributary to Chico Arroyo, a tributary to the Rio Puerco, a water of the United States.

The information below is listed in the Navajo Nation=s Department of Fish & Wildlife B Natural Heritage Program (NHP) database. The FWS has deferred all of its survey and information collection in the Navajo Nation to the Navajo Nation NHP.

The Navajo Nation NHP had identified seven (7) listed, proposed or candidate T or E species that may potentially occur within the facility boundary or on the 7.5 minute quadrangle(s) of the facility boundary. The listed species are listed as follows:

Names (common and scientific)	Status
Mountain Plover (<i>Charadrius montanus</i>)	Proposed T
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	E
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	T
Black-footed ferret (<i>Mustela nigripes</i>)	E
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	T
Razorback sucker (<i>Xyrauchen texanus</i>)	E
Mesa Verde cactus (<i>Sclerocactus mesae-verdae</i>)	T

The NHP had also identified six (6) Navajo endangered species as follows:

Names (common and scientific)
Pronghorn (<i>Antilocapra americana</i>)
Golden Eagle (<i>Aquila chrysaetos</i>)
Bluehead sucker (<i>Catostomus discobolus</i>)
Mottled Sculpin (<i>Cottus bairdi</i>)
Peregrine Falcon (<i>Falco peregrinus</i>)
Roundtail chub (<i>Gila robusta</i>)

B. EPA=s Finding:

This permit authorizes the discharge of treated wastewater in conformance with the federal secondary treatment regulations and the Navajo Nation Surface Water Quality Standards. These standards are applied in the permit both as numeric and narrative limits. The standards are designed to protect aquatic species, including threatened and

endangered species, and any discharge in compliance with these standards should not adversely impact any threatened and endangered species.

EPA believes effluent released in compliance with this permit will have no effect on any federally-listed threatened or endangered species or its critical habitat that may be present in the vicinity of the discharge. Although this is considered a new discharge, the treatment facility has been in existence for some time, and no new construction or modifications had been made to it due to the proposed NPDES permit. Therefore, no requirements specific to the protection of endangered species are proposed in the permit. EPA may decide that changes to the permit may be warranted based on receipt of new information. A re-opener clause has been included should new information become available to indicate that the requirements of the permit need to be changed.

XI. Administrative Information -- Public Notice, Public Comments, and Requests for Public Hearings

In accordance with 40 CFR 124.10, public notice shall be given by the U.S. EPA that a draft NPDES permit has been prepared by mailing a copy of the notice to the permit applicant and other Federal and State agencies, and through publication of a notice in a daily or weekly newspaper within the area affected by the facility. The public notice shall allow at least 30 days for public comment on the draft permit.

In accordance with 40 CFR 124.11 and 12, during the public comment period, any interested person may submit written comments on the draft permit, and may request a public hearing if no hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. In accordance with 40 CFR 124.13, all persons must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position within thirty (30) days from the date of the public notice. Comments may be received either in person or mailed to:

U.S. Environmental Protection Agency, Region IX
NPDES Permits Office (WTR-5)
Attn: Linh Tran
75 Hawthorne Street
San Francisco, CA 94105
Telephone: (415) 972-3511

Interested persons may obtain further information, including copies of the draft permit, fact sheet/statement of basis, and the permit application, by contacting Linh Tran (WTR-5) at the U.S. EPA address, above. Copies of the administrative record (other than those which U.S. EPA maintains as confidential) are available for public inspection between 8:00 a.m. and 4:30 p.m., Monday through Friday (excluding federal holidays).

In accordance with 40 CFR 124.12, the U.S. EPA shall hold a public hearing when, on the basis of requests, a significant degree of public interest in the draft permit exists. The Director may also hold a public hearing when, for instance, such a hearing might clarify one or

more issues involved in the permit decision. Public notice of such hearing shall be given as specified in 40 CFR 124.10.